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MODEL CLAUSES FOR CIVIL ENGINEERING WORKS

SECTION 100 BEARINGS

Contents **Page**

100.001	General	2
100.002	Design of bearings	2
100.003	Manufacture and installation of bearings	3
100.004	Bearings, other than elastomeric	3
100.005	Preliminary information on bearings	3
100.006	Welding	3
100.007	Presetting of bearings	3
100.008	Protective treatment	3
100.009	Load testing of bearings	3
100.010	Test certificates and details of bearings	3
100.011	Bearings and fixing arrangements	4
100.012	Bearing levels	4
100.013	Method statement for installation and removal of bearings	4
100.014	Attendance of the manufacturer's representative at installation	4
100.015	Bedding for laminated, plain pad or strip type elastomeric bearings	4
100.016	Bearing grout	4
100.017	Storage of bearing grout	5
100.018	Installation of the bearing grout	5
100.019	Testing of bearing grout	6
100.020	Tests required prior to acceptance of a bearing grout	7
100.021	Additional requirements	8
References	British Standards	9
	Other publications	9

Documents
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SECTION 100 BEARINGS

General **100.001**

Except as identified in this Specification and Appendices, bearings shall comply with the requirements of BS EN 1337. Unless otherwise identified in the Contract, the 'overseeing organisation' shall be Network Rail.

PD 6703 provides non-contradictory complementary information to BS EN 1337. The guidance in PD 6703 shall be applied wherever it is reasonably practicable to do so, and the term 'should' therein shall be treated as 'shall', except as identified in this Specification and Appendices.

References in PD6703 to an ENV document shall be deemed to be to the published EN document that superseded the ENV version.

Design of bearings **100.002**

Responsibility for design is specified in Appendix 100/1.

Except as identified in this Specification and Appendices, bearings shall be designed in accordance with BS EN 1337. The design shall meet the requirements shown on the Bearing Schedule provided in Appendix 100/11 or the Contract Drawings (as applicable). (In some cases the Bearing Schedule will be incorporated via the Contract Drawings rather than the Appendix.)

Unrestrained uplift at bearings shall not be permitted.

The introduction of restraints to prevent uplift at bearings will only be permitted in exceptional circumstances, and shall require approval of Network Rail.

Unless otherwise stated in the Contract:

i) the bearing designer shall check that at all stages of installation and use the bearing is satisfactory with regard to the effects of the number, position and size of any supporting shims, and the applicable loading,

ii) the structure designer shall check that the superstructure and the substructure are also satisfactory for these effects.

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Manufacture and installation of bearings **100.003** Bearings shall be manufactured and installed in accordance with (a) BS EN 1337 - except as identified in this Specification and Appendices, (b) the Bearing Schedule in Appendix 100/11, and (c) the Contract Drawings.

Bearings shall be supplied by a reputable manufacturer; that is one with a proven track record of supplying durable bearings for railway applications in Europe. Details of the proposed supplier shall be included with the tender return.

Bearings, other than elastomeric **100.004** Unless otherwise specified in Appendix 100/2, the values of partial material factors shall be as identified in PD 6703 clause 9.2.1.

Preliminary information on bearings **100.005** Details of the bearing manufacturer and outline details of the bearings (including the design working life and details of any corrosion protection) along with proposed supply and delivery timescales shall be submitted with the Tender.

Welding **100.006** Welding procedures and requirements for welding shall be in accordance with Section 90 (Steelwork) and shall be submitted to the Employer's Representative for approval.

Presetting of bearings **100.007** In addition to Clause 4 of BS EN 1337-1, where presetting of a bearing is considered necessary by the manufacturer, proposals shall be submitted to the Employer's Representative for approval.

Protective treatment **100.008** Unless otherwise approved by the Employer's Representative, the bearings shall have a protective treatment applied as specified in BS EN 1337, and relevant parts of Sections 170 to 176 (Protective treatments); in cases of disagreement between BS EN 1337 and the Model Clauses, the latter shall take precedence.

Load testing of bearings **100.009** Where necessary, testing requirements additional to those given in BS EN 1337 and PD 6703 are specified in Appendix 100/2.

Test certificates and details of bearings **100.010** The Employer's Representative shall be provided with (a) two copies of all test certificates and/or results identified in BS EN 1337 and PD 6703, as amended by this Specification, (b) details of the bearing design life and bearing properties, and (c) load capacities where these exceed the requirements shown on the Contract Drawings and/or Bearing Schedule.

Acceptance tests shall be carried out in accordance with PD 6703 clause 9.2 with 'should' replaced by 'shall'. The numbers of tests shall be as specified in the Bearing Schedule.

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